

CLAIMS

Please cancel claims 1 - 15.

16. (currently amended) A method of forming a cavity within a concrete structure comprising the steps of:

providing a plurality of rigid section members each comprising a flexible mold skeleton member and a polymer-aggregate concrete panel member joined to said mold skeleton member, said concrete panel member imparting rigidity to said flexible mold skeleton;

joining said section members to each other to create a three-dimensional tubular form having a smooth-walled tubular exterior surface;

pouring concrete onto said exterior surface of said form and allowing said concrete to cure to form a concrete structure;

disassembling and removing said section members such that a smooth-walled tubular cavity is present within said concrete structure.

17. (currently amended) The method of claim 16, further comprising the steps of:

creating each of said section members by forming a mold skeleton member comprising a tubular wall portion, a pair of annular flanges and a pair of longitudinal flanges, with said annular flanges and said longitudinal flanges extending internally and externally relative to both ~~sides of~~ said tubular wall portion; and

spraying polymer-aggregate concrete onto the exterior of said three-dimensional form to completely fill the space between said annular flanges and said longitudinal flanges, and planing ~~planing~~ said sprayed polymer-aggregate concrete using said annular flanges and said

longitudinal flanges as planing guides to produce said ~~[[a]]~~ smooth-walled exterior surface on said three-dimensional tubular form.

18. (original) The method of claim 17, wherein said step of joining said section members to each other is performed by providing mechanical fasteners and connecting adjacent said annular flanges and adjacent said longitudinal flanges on the interior side of said tubular wall portions with said mechanical fasteners.

19. (currently amended) The method of claim 17 ~~[[16]]~~, further comprising the steps of:
inserting spacer members between said annular flanges and said longitudinal flanges of adjoining said section members, said spacer members extending externally beyond said annular flanges and said longitudinal flanges; and

spraying polymer-aggregate concrete onto the exterior of said three-dimensional form, and planing ~~planning~~ said sprayed polymer-aggregate concrete using said spacer members as planing guides to produce said ~~[[a]]~~ smooth-walled exterior surface on said three-dimensional tubular form.

20. (original) The method of claim 16, further comprising the step of internally pressurizing said three-dimensional form to increase its rigidity.

21. (original) The method of claim 18, further comprising the step of internally pressurizing said three-dimensional form to increase its rigidity.

22. (original) The method of claim 19, further comprising the step of internally pressurizing said three-dimensional form to increase its rigidity.

23. (new) The method of claim 17, further comprising the step of applying a glaze layer onto said smooth-walled exterior surface on said three-dimensional tubular form.

24. (new) The method of claim 19, further comprising the step of applying a glaze layer onto said smooth-walled exterior surface on said three-dimensional tubular form.

25. (new) A method of forming a curvilinear, tubular, smooth-walled cavity within a concrete structure comprising the steps of:

providing a plurality of section members each comprising a flexible mold skeleton member comprising a tubular wall portion, a pair of annular flanges and a pair of longitudinal flanges, with said annular flanges and said longitudinal flanges extending internally and externally to said tubular wall portion;

joining said section members to each other to create a three-dimensional tubular form;

applying polymer-aggregate concrete onto the exterior of said section members to completely fill the space between said annular flanges and said longitudinal flanges, planing said sprayed polymer-aggregate concrete using said annular flanges and said longitudinal flanges as planing guides to produce a smooth-walled, curvilinear exterior surface on said three-dimensional tubular form, and allowing said polymer-aggregate concrete to cure to rigidify said section members;

pouring concrete onto said exterior surface of said tubular form and allowing said concrete to cure to form a concrete structure;

disassembling and removing said section members whereby a curvilinear, tubular, smooth-walled cavity is present within said concrete structure.

26. (new) The method of claim 25, wherein said step of joining said section members to each other is performed by providing mechanical fasteners and connecting adjacent said annular flanges and adjacent said longitudinal flanges on the interior side of said tubular wall portions with said mechanical fasteners.

27. (new) The method of claim 26, further comprising the step of internally pressurizing said three-dimensional form to increase its rigidity.

28. (new) The method of claim 24, further comprising the step of applying a glaze layer onto said smooth-walled exterior surface on said three-dimensional tubular form after said polymer-aggregate concrete has cured.

29. (new) A method of forming a curvilinear, tubular, smooth-walled cavity within a concrete structure comprising the steps of:

providing a plurality of section members each comprising a flexible mold skeleton member comprising a tubular wall portion, a pair of annular flanges and a pair of longitudinal flanges, with said annular flanges and said longitudinal flanges extending internally and externally to said tubular wall portion;

inserting spacer members between said annular flanges and said longitudinal flanges of adjoining said section members, said spacer members extending externally beyond said annular flanges and said longitudinal flanges;

joining said section members to each other to create a three-dimensional tubular form;

applying polymer-aggregate concrete onto the exterior of said section members to completely fill the space between said annular flanges, said longitudinal flanges and said spacer members, planing said sprayed polymer-aggregate concrete using said spacer members as planing guides to produce a smooth-walled, curvilinear exterior surface on said three-dimensional tubular form, and allowing said polymer-aggregate concrete to cure to rigidify said section members;

pouring concrete onto said exterior surface of said tubular form and allowing said concrete to cure to form a concrete structure;

disassembling and removing said section members and said spacer members whereby a curvilinear, tubular, smooth-walled cavity is present within said concrete structure.

30. (new) The method of claim 29, wherein said step of joining said section members to each other is performed by providing mechanical fasteners and connecting adjacent said annular flanges and adjacent said longitudinal flanges on the interior side of said tubular wall portions with said mechanical fasteners.

31. (new) The method of claim 29, further comprising the step of internally pressurizing said three-dimensional form to increase its rigidity.

32. (new) The method of claim 30, further comprising the step of internally pressurizing said three-dimensional form to increase its rigidity.

33. (new) The method of claim 29, further comprising the step of applying a glaze layer onto said smooth-walled exterior surface on said three-dimensional tubular form after said polymer-aggregate concrete has cured.